New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

Silicon NPN Power Transistor

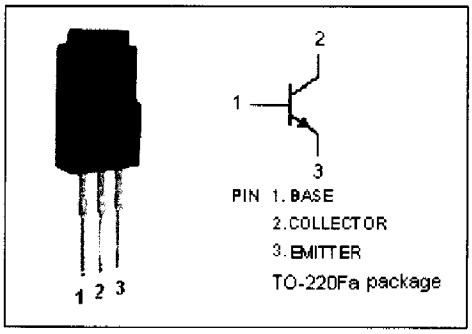
BD949F/951F/953F/955F

DESCRIPTION

- DC Current Gain-
  : h_{FE}= 40(Min)@ I_C= 500mA
- Complement to Type BD950F/952F/954F/956F

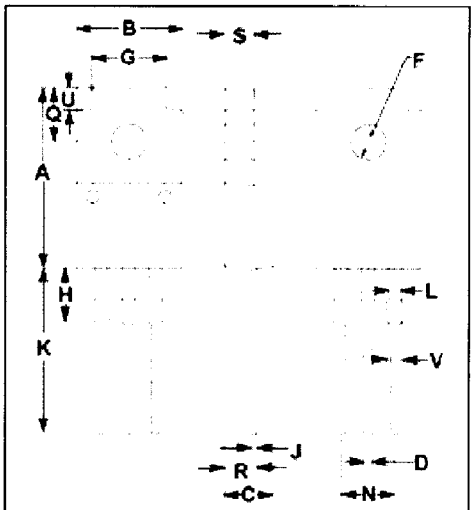
APPLICATIONS

- Designed for power amplifier and switching applications



ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BD949F	60	V
		BD951F	80	
		BD953F	100	
		BD955F	120	
V_{CEO}	Collector-Emitter Voltage	BD949F	60	V
		BD951F	80	
		BD953F	100	
		BD955F	120	
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current-Continuous		5	A
I_{CM}	Collector Current-Peak		8	A
P_C	Collector Power Dissipation @ T_C=25℃		22	W
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature Range		-65~150	℃



DIM	mm MIN	MAX
A	16.85	17.15
B	9.90	10.10
C	4.35	4.65
D	0.75	0.80
F	3.20	3.40
G	6.90	7.10
H	5.15	5.45
J	0.45	0.75
K	13.35	13.65
L	1.10	1.30
N	4.98	5.18
Q	4.85	5.15
R	2.95	3.25
S	2.70	2.90
U	1.75	2.05
V	1.30	1.50

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	8.12	℃/W

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Quality Semi-Conductors

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BD949F	I_C= 100mA ; I_B= 0	60			V
		BD951F		80			
		BD953F		100			
		BD955F		120			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		I_C= 2A; I_B= 0.2A			1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage		I_C= 2A; V_{CE}= 4V			1.4	V
I_{CBO}	Collector Cutoff Current		V_{CB}= V_{CBOmax}; I_E= 0 V_{CB}= $^1/_2V_{CBOmax}$; I_E= 0,T_J=150℃			0.05 1	mA
I_{CEO}	Collector Cutoff Current		V_{CE}= $^1/_2V_{CEOmax}$; I_B= 0			0.1	mA
I_{EBO}	Emitter Cutoff Current		V_{EB}= 5V; I_C= 0			0.2	mA
h_{FE-1}	DC Current Gain		I_C= 500mA ; V_{CE}= 4V	40			
h_{FE-2}	DC Current Gain		I_C= 2A ; V_{CE}= 4V		20		
f_T	Current-Gain—Bandwidth Product		I_C= 500mA ; V_{CE}= 4V	3			MHz

Switching Times

t_{on}	Turn-On Time	I_C= 1.0A; I_{B1}= -I_{B2}= 0.1A		0.3		μs
t_{off}	Turn-Off Time			1.5		μs

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